

Project Baseline Summary Report

Data Source: **EM CDB**
Operations/Field Office: **Savannah River**
Site Summary Level: **Savannah River Site**
Project **SR-SW07 / Pollution Prevention**

Report Number: **GEN-01b**
Print Date: **3/9/2000**
HQ ID: **0050**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Purpose:

Pollution Prevention is the SRS preferred approach to reducing waste, mitigating health risks, and protecting the environment. The Pollution Prevention Program provides SRS a safe, effective, and environmentally responsible strategy to implement specific waste and pollutant reduction techniques based on current and projected information on waste generation, waste characterization, and ultimate waste disposal costs. In addition, pollution prevention is the key component of the SRS ISO 140001 certification program for its environmental management system and integrated safety management systems.

Scope:

The Pollution Prevention (P2) Program project includes both in-field generator programs and a site-wide coordination program. The generator program is funded through each generator's operating budget and set-aside fee funds to coordinate facility specific program initiatives and to implement process modifications and new technologies. Site-wide program coordination which is managed by the Solid Waste Division is separately funded and provides the following:

- a) Pollution Prevention Program management
- b) Technical assistance for facility walk throughs, lifecycle waste cost analyses, and pollution prevention opportunity assessments.
- c) Coordination of set-aside fee pollution prevention projects.
- d) Forums for waste minimization and pollution prevention information and technology exchanges.
- e) Increased employee pollution prevention awareness and training programs.
- f) Contaminated metal and large equipment recycling and disposition.
- g) Mechanisms to increase waste generator accountability through the Waste Management Council and fee programs.
- h) Completion of program performance measurement and required annual plans and reports.
- i) Implementation of site-wide initiatives such as sanitary waste recycle, Green is Clean programs and other crosscutting initiatives.

Technical Needs and Approach

The P2 Program will develop and implement innovative technologies to prevent pollution and minimize releases from all SRS generator activities. SRS has identified two emergent needs and one generic needs statements to identify technology focus areas (see needs statements). These are: SR99-1014 Cleaning/laundrying alpha contaminated materials for reuse; SR99-1015 Development of incinerable air supplied suits and hoods; and SR99-1017 Development of pollution prevention technologies for contamination area recovery, environmental monitoring and reclamation, decontamination and disassembly, and site processes and operations. SRS P2 Program will use set-aside fee funds to leverage OST Focus Area funding, as deemed economically practical, to support P2 technology deployments.

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Project Description Narratives

Project Status in FY 2006:

The Pollution Prevention Program will be active in and will continue beyond FY2006. Program scope will be reduced due to prior implementation of initiatives and transfer of some program responsibilities to the waste generating organizations. The P2 Program will continue to strive to develop pollution prevention, energy efficiency, and resource conservation to be cultural norms that support achievement of environmental and operational excellence at the Savannah River Site. Work will continue in providing program management, including planning, technical development, internal and external communications, progress tracking, evaluation, and reporting.

Post-2006 Project Scope:

Pollution Prevention Program will continue existing practices and projects and will continue to seek and implement opportunities to provide cost-effective pollutant reduction.

Project End State

Project end-state will occur when P2 Program is self-sustaining or program is no longer cost effective due to reduced pollution generation and maximized benefits from P2 opportunities.

Cost Baseline Comments:

FY97-98: The Pollution Prevention (P2) Program's waste reduction and waste elimination initiatives have saved \$11 million in disposal costs.

FY99-00: The P2 Program will provide an estimated \$20 million life-cycle savings through waste reduction and waste elimination initiatives.

Escalation is assumed at 2.7%.

Target funding is substantially less than planned

Safety & Health Hazards:

There are no hazards identified for this PBS.

Safety & Health Work Performance:

Activities and check points are described by the Integrated Management System Description. The conditions and requirements are clearly established and agreed upon prior to the starting of any project and those requirements are contractually binding upon WSRC. The key elements of the WSRC Integrated Safety Program are to define the scope of work, identify and analyze hazards associated with the work, develop and implement hazard controls, perform work within controls, and provide feedback on adequacy of controls and continue to improve safety management. The WSRC Integrated Procedures Management System is the primary mechanism for implementing the objective, principles and functions of the Safety Management System. This system establishes Company-Level, Division-level, and Program-specific procedures consistent with organizational roles, and ensures a consistent, discipline site-wide approach to safety while performing work. The resource description, costs and skill mix are defined in the following Sections: Costs D.2.2 and D.3, FTEs D. 2.5 and 2.7 of this document.

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PBS Comments:

Pollution Prevention paves the way for the necessary paradigm shift from a culture of accepting and managing large waste volumes, to one that aggressively prevents the creation of waste. Small, up-front investments in pollution prevention today can significantly reduce the high costs of tomorrow's compliance.

Baseline Validation Narrative:

General PBS Information

Project Validated?

Date Validated:

Has Headquarters reviewed and approved project?

No

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/3/1999

FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	Y	Y	N	N	N	Y	Y	Y

Project Identification Information

DOE Project Manager: Karen L. Hooker

DOE Project Manager Phone Number: 803-725-9615

DOE Project Manager Fax Number: 803-725-3616

DOE Project Manager e-mail address: karen.hooker@srs.gov

Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
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Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	20,361	100,728	121,089	2,562	2,562	2,365	2,365	1,710	1,122	1,822	2,043	2,098	2,154	2,213	2,272	
PBS Baseline (constant 1999 dollars)	18,683	53,802	72,485	2,562	2,562	2,365	2,365	1,710	1,083	1,698	1,853	1,853	1,853	1,853	1,853	
PBS EM Baseline (current year dollars)	20,361	100,728	121,089	2,562	2,562	2,365	2,365	1,710	1,122	1,822	2,043	2,098	2,154	2,213	2,272	
PBS EM Baseline (constant 1999 dollars)	18,683	53,802	72,485	2,562	2,562	2,365	2,365	1,710	1,083	1,698	1,853	1,853	1,853	1,853	1,853	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	2,334	2,397	2,461	2,528	13,700	15,652	17,883	20,431	23,342	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	1,853	1,853	1,853	1,853	9,278	9,278	9,278	9,278	9,278	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	2,334	2,397	2,461	2,528	13,700	15,652	17,883	20,431	23,342	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	1,853	1,853	1,853	1,853	9,278	9,278	9,278	9,278	9,278	0	0	0	0	0	0	0

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	3.60%	3.60%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

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2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2024

Current Projected End Date of Project: 9/30/2035

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	74,020	Actual 1997 Cost:	2,562	Actual 1998 Cost:	2,365
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	69,093	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			1,866
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	70,959				

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):	-3,397	Improved generator performance and support
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	67,562	
Additional Amount to Reconcile (+):	-4	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	67,558	

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Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Complete Alpha Laundry Demonstration & Document result.	SR-SW07-075		8/30/1999		7/30/1999						
Complete Fabr of Prototype APT Sheild Blocks	SWC66		8/13/1999		8/13/1999						
Document 5% FY99 Waste Avoidance	SR-SW07-067		9/30/1999		9/30/1999						
Document Plan to increase diversion of clean waste.	SR-SW07-085		1/29/1999		1/29/1999						
Project Start	SR-SW07-001		10/1/1996								
Project Complete	SR-SW07-002		9/30/2035								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Complete Alpha Laundry Demonstration & Document result.	SR-SW07-075										
Complete Fabr of Prototype APT Sheild Blocks	SWC66									Y	
Document 5% FY99 Waste Avoidance	SR-SW07-067										
Document Plan to increase diversion of clean waste.	SR-SW07-085										
Project Start	SR-SW07-001			Y							
Project Complete	SR-SW07-002				Y						

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
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Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
Tech.														
Deployed	Ntd	3.00	0.00	3.00					1.00	2.00				
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	
Tech.														
Deployed	Ntd													
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total				
Tech.														
Deployed	Ntd								1.00	3.00				

Technology Needs

Site Need Code: SR99-1014

Site Need Name: Cleaning of Alpha Contaminated Launderables

Focus Area Work Package ID:

Focus Area:

Benefits (Cost, Risk Reduction, Both): Cost

Focus Area Work Package:

Agree with Technology Link: N

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

Site Need Code: SR99-1015
Site Need Name: Incinerable, Low-PVC Plastic Suits, Hoods, and Breathing Air Hoses

Focus Area Work Package ID: Focus Area Work Package:
Focus Area: Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

<u>Technologies</u>	<u>Cost Savings (in thousands of dollars)</u>	<u>Range of Estimate</u>
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Site Need Code: SR99-1017
Site Need Name: Pollution Prevention Technologies

Focus Area Work Package ID: MW-08 Focus Area Work Package: Facilitating Deployment for Unique Wastes
Focus Area: MWFA Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

<u>Technologies</u>	<u>Cost Savings (in thousands of dollars)</u>	<u>Range of Estimate</u>
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Technology Deployments

Deployment Year		
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<u>Deployment Status</u>	<u>Planned</u>	<u>Forecast</u>	<u>Actual Date</u>
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Technology Name: Dissolvable Anti-Contamination System (OREX)			
Potential Deployment	2000		

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<u>Deployment Status</u>	Deployment Year		
	<u>Planned</u>	<u>Forecast</u>	<u>Actual Date</u>
Technology Name: Cleaning Alpha Contaminated Launderables			
Potential Deployment	2000		
Technology Name: Green is Clean Monitor			
Deployment Commitment	1999		